Abstract

The invention relates to a method for the preparation of a sodium-based reactive desulphurizing agent for use in molten ferrous materials. The sodium in the reactive desulphurizing agent is a sodium silicate, a composition comprising of Na_2O and SiO_2. In a second embodiment of the invention, the sodium silicate reactive desulphurizing agent also comprises of an alkali or an alkaline material or other materials, such as oxides of calcium, aluminum and magnesium. Preferred raw materials for the oxides of calcium, aluminum and magnesium are, respectively, lime, alumina and dolomite. The premixed solid reactive desulphurizing agent is brought in contact with the molten ferrous material, allowing the desulphurization or the double replacement of the iron sulphur to take place and produce a ferrous oxide. The sodium in the reactive desulphurizing agent is rendered resistant to combustion or evaporation on contact with the molten ferrous materials by the flux activity of the silica. A metallic solid, such as aluminum, is introduced into the molten ferrous material to complete the reduction of the ferrous oxide.